

LAND SYSTEM
Tumley Flats

398129

Area (ha):
2870

COMPONENT	A			D
PROPORTION (%)	10	30	30	30
RAINFALL (mm)	Approximate Annual Rainfall: 625-750			
GEOLOGY	Quaternary Clays, Sands, Gravels			
TOPOGRAPHY	Undulating Plains			
Position	Low Stony Crests	Well Drained Flats		Drainage Flats
Typical Slope()	3	2	1	0
NATIVE VEGETATION				
Structure		Woodland/Open Forest		Scrub/Sedgeland
Floristic Association (See Appendix 1 for common names)	<i>Eucalyptus amygdalina</i>	<i>Eucalyptus pulchella</i>	<i>Eucalyptus amygdalina</i>	<i>Eucalyptus ovata</i>
	<i>Eucalyptus viminalis</i>	<i>Eucalyptus amygdalina</i>	<i>Acacia dealbata</i>	<i>Leptospermum lanigerum</i>
	<i>Acacia dealbata</i>	<i>Lomandra longifolia</i>	<i>Lomandra longifolia</i>	<i>Myriophyllum sp.</i>
	<i>Lomandra longifolia</i>	<i>Hibbertia fasciculata</i>	<i>Diplarrena moraea</i>	<i>Juncus sp.</i>
	<i>Diplarrena moraea</i>	<i>Lissanthe strigosa</i>	<i>Viola hederacea</i>	<i>Eleocharis gracilis</i>
	<i>Viola hederacea</i>	<i>Acacia dealbata</i>		<i>Carex gaudichaudiana</i>
	<i>Pteridium esculentum</i>			<i>Ranunculus sp.</i>
	<i>Hibbertia fasciculata</i>			<i>Triglochin sp.</i>
	<i>Epacris impressa</i>		<i>Poa sp.</i>	
	<i>Goodenia lanata</i>			
SOIL				
Surface (A)Texture	Sandy Loam	Sandy Clay Loam	Clay Loam	Light Clay
B Horizon (subsoil)	Shallow stony clay -	Shallow medium clay -	Deep heavy clay - strong.	Deep medium clay -
Colour (moist)	brown (10 YR 5/3) to	Olive brown (2.5 Y 4/4)	brown (7.5 YR 5/8) to	black (10 YR 2/1) .
Texture and primary profile form	yellowish red (5 YR 5/8) with yellowish brown (10 YR 5/6) mottle.	medium clay. Duplex.	light grey (7.5 YR 7/) with strong brown (7.5 YR 5/8) mottle.	Gradational .
	Lateritic gravels abundant.		Duplex.	
	Duplex.			
Permeability	Moderate	Moderate	Moderate	Low
Typical depth(m)	0.50	0.50	1.20	>1.40
LAND USE	Grazing			
HAZARDS	High Sheet, Rill Erosion		High Gully, Streambank Erosion Flooding, Waterlogging	

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TWAMLEY FLATS

This land system includes the undulating plains east of Buckland and has been extrapolated to include the flats at Runnymede.

Low, stony crests contain a shallow (0.50 m), duplex soil with a sandy loam surface over a brown to yellowish red, medium clay that contains abundant lateritic gravels. This soil supports a woodland dominated by *Eucalyptus amygdalina* and *Eucalyptus viminalis* with an understorey of *Acacia dealbata*, *Lomandra longifolia*, *Doplarrena moraea*, *Viola hederacea*, *Pteridium esculentum*, *Hibbertia fasciculata*, *Epacris impressa* and *Goodenia lanata*.

Well drained flats have a shallow (0.50 m), duplex soil with a sandy clay loam surface over an olive brown, medium clay. This supports a woodland dominated by *Eucalyptus pulchella* and *Eucalyptus amygdalina* with an understorey of *Lomandra longifolia*, *Hibbertia fasciculata*, *Lissanthe strigosa* and *Acacia dealbata*. Well drained flats also contain a deep (1.20 m), duplex soil consisting of a clay loam surface over a strong brown to light grey clay with a strong brown mottle. This supports a woodland to open forest dominated by *Eucalyptus amygdalina* with an understorey of *Acacia dealbata*, *Lomandra longifolia*, *Diplarrena moraea* and *Viola hederacea*.

Drainage flats contain a deep, gradational soil with a light clay surface over a black, medium to heavy clay. This sustains a woodland dominated by *Eucalyptus ovata* with an understorey of *Leptospermum lanigerum*, *Myriophyllum sp.*, *Juncus sp.*, *Eleocharis gracilis*, *Carex gaudichaudiana*, *Ranunculus sp.*, *Triglochin sp.* and *Poa sp.*

The native vegetation has been predominantly cleared for grazing. The sandy crests and flats are particularly prone to sheet and rill erosion whilst flooding, waterlogging and severe gully erosion are associated with the drainage flats. Goede has described the discontinuous gullying problems on the Tea Tree Rivulet (1971); the floodplain stratigraphy (1973) and the geomorphology of the Buckland Basin (1965).



The Twamley Flats (398129) Land System near Buckland with the Stonehurst Sugarloaf (372144) Land System in the background.